

### ABSTRACT OF THE DISCLOSURE

The present invention relates to an apparatus and method for dynamically loading and managing software services on a network device. A service environment ported to the network device includes a service environment kernel and a virtual machine. The service environment kernel continually operates on the network device and manages the downloading of services from a remote location onto the network device. In accordance with a request from a remote client such as a network manager, the service environment kernel causes instructions corresponding to the downloaded service to be provided to the virtual machine for execution on the network device. Associated with the service are service relationships. The service environment kernel manages these relationships by maintaining a registry of services and their dependencies on other services. The service environment kernel also controls the execution of services in accordance with the service relationships.